

17 APR 1979

IHC Study
(EXCOM)

MEMORANDUM FOR: Secretary, Executive Committee

FROM : James H. Taylor
Comptroller

Don I. Wortman
Deputy Director for Administration

SUBJECT : Information Handling Study

REFERENCE : Comptroller Memo of 21 Nov. 1978 to Deputy
Directors and DCI Admin., Same Subject

1. This memorandum recommends Executive Committee approval, as stated in paragraph 9, for an Agencywide study to develop a strategic plan in information handling. A definition of the problem is proposed, based on comments from Agency components, as well as management arrangements and a basic methodology for the study.

2. The proposed study is intended to fulfill the Agency goal proposed jointly by the DDA and the Comptroller and adopted at the DCI's Goals Conference in September 1978:

To develop a comprehensive information handling strategy for the Agency and a structure for more formal continuing coordination of the Agency's ADP, communications, records management, and word processing activities.

The reasons for pursuing this goal are manifold; the referenced memorandum reviews several of them. In general, there is a growing sentiment among managers at all levels on the need to set a long-range course in Agency information handling and to find a way for managers to work together better in setting the course and pursuing it.

3. Given proper guidance, resources, and expertise, the proposed study should result in a strategic plan which will govern the development or revision of information handling systems and provide a framework to ensure that major investment decisions are consistent with our long-term needs. Within five years, if our planning is effective, we should be in a position to assert that CIA's information flows through well understood, carefully constructed systems, automated where cost effective, compartmented where security dictates, and capable of relating smoothly and efficiently with

other systems when such interrelationship is necessary or desirable. The plan will not be static; it must be flexible enough to accommodate new needs and solve unanticipated problems as they arise.

4. The plan should serve both senior managers, by proposing management adjustments and advising them on the kinds of issues that warrant their attention over the next five years, and systems and component managers, by providing guidance to them on requirement priorities and recommending methods for achieving "a system of systems."

5. In order to develop guidance on what we want to see in the end product of the study, an attempt has been made to define the Agency's information handling problem. As a first step, responses on several questions relating to information handling were solicited from all Agency components (see reference). These were reviewed carefully (and with some difficulty because of the diversity of views). Attachment A contains the results of the analysis of the responses. The following summarizes this analysis:

a. The topic. Information handling in CIA is the systematic creation, movement, use, storage, retrieval, and disposal of intelligence and management information with the support of automated or other clearly identifiable processes and with due regard for control of sensitive and compartmented data.

b. The problem. CIA handles enormous amounts of intelligence and management information. It has devised numerous manual and automated systems, some of them highly successful, to assist in the generation, movement, use, storage, retrieval, and disposal of this mass of data. In far too many cases, however, these systems interact and relate to one another on a random, unplanned basis. Where exceptions exist, where "systems of systems" have been developed by forward-looking managers and systems analysts, there has existed no mechanism to relate these "systems of systems" to other such systems. Additionally, no Agencywide standards or policies exist to govern the development of new systems or the beneficial interfacing of existing systems. If we are to develop more orderly, systematic methods for managing our information, we need to know more about our existing information handling systems, about the ways in which these systems do or do not interact, and about how certain systems should interact.

c. The major issues.

- (1) There is no central organization responsible for policy formulation, planning, and tracking the effectiveness of the many information handling systems in use or proposed for use in CIA.

- (2) Growth in the volume of information handled by CIA components places a premium on development of more effective means of moving, selecting, retrieving, displaying, and discarding that information.
- (3) No common standards and policies exist for planning and guiding the development of information handling systems and the selection of software and hardware to automate those systems.
- (4) Technological developments are blurring the traditional functional boundaries between information handling organizations, and we have not developed mechanisms to deal effectively with cross-functional information handling techniques.

6. The identification of the Agency's information handling problems leads to the next step: establishing substantive guidance for those responsible for the planning study. This will require some interaction between the Executive Committee and the manager of the study when he/she is identified. As a takeoff point for this interaction, a list of questions that the study should address has been drafted. They were derived from the issues listed above and from our perception of top-level management concerns. The first cut at this guidance for this study is in Attachment B.

7. The following steps should be taken in carrying out this study:

- a. The Executive Committee should direct the DDA to designate a senior Agency officer as the full-time project manager, and provide a small professional staff of one or two officers and a secretary. Candidates from the Agency at large should be considered for these positions.
- b. The project manager should develop terms of reference and a study plan and obtain Executive Committee approval to proceed. The project manager should explore the advantages of using contractor support to assist with the project. Funds should be allocated for this purpose.
- c. Under the guidance of the DDA, the project team should, over a period of about one year, develop a strategic plan for information handling, reporting progress to the Executive Committee as the DDA and the DDCI deem appropriate.
- d. The Executive Committee should approve the plan after appropriate Agencywide review and begin to monitor its execution.

8. In reviewing alternatives to the proposed approach, the Executive Committee should consider the following points:

a. It should be clear that while there are differing views on many aspects of this topic--its definition, the problems and possible solutions--there is general agreement that the problem needs attention.

b. There is a fundamental question about the scope of the study that is concerned not only with one's concept of what is or is not to be included under the definition of information handling, but also with the manageability and cost of the effort. We believe the study should be as comprehensive as possible, within the limits imposed by a rather fixed schedule and the resources and talents of the study team.

c. The most basic question, of course, is whether to undertake the study. While the payoff is difficult to predict (primarily because the Agency has never undertaken such an effort), the results to be expected from our current methods of dealing with our information handling future are equally as unpredictable. New information systems will emerge; old ones will be modified. Without a strategic plan, the managers of these systems will continue to be plagued with the problems we see today and their efforts will at best produce only incremental improvements in our current situation in system design and interaction, procurement, data flow procedures, standards--all those issues mentioned by Agency components and summarized above.

9. It is recommended that the Executive Committee:

a. Approve in principle the proposed information handling study.

b. Endorse the general statement of the problem and the issues stated in paragraph 5 as the basic guidance for the study.

c. Endorse the general methodology for the study as proposed in paragraph 7 and ensure the support of all Agency components in the data gathering and analysis tasks of the study.

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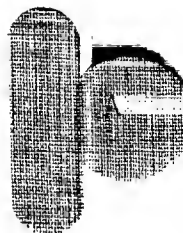


James H. Taylor

DON WORTMAN
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Attachments:
As Stated

Approved For Release 2002/05/17 : CIA-RDP84-00933R000100310017-1



Approved For Release 2002/05/17 : CIA-RDP84-00933R000100310017-1

ODP # 9-342

02 APR 1979

MEMORANDUM FOR: James H. Taylor
Comptroller

Don I. Wortman
Deputy Director for Administration

FROM : Bruce Johnson
Acting Director of Data Processing

SUBJECT : Information Handling Study; Problem Definition

REFERENCE : Comptroller Memo of 21 Nov. 1978 to Deputy
Directors and DCI Admin., Same Subject

1. An Agency goal in information handling was proposed jointly by the DDA and the Comptroller and adopted at the DCI's Goals Conference in September 1978. The goal has been stated as follows:

To develop a comprehensive information handling strategy for the Agency and a structure for more formal continuing coordination of the Agency's ADP, communications, records management, and word processing activities.

In November 1978 the Comptroller solicited comments on the goal from all Agency components, requesting responses to the following four questions:

a. How, for management purposes, should we define information handling? So many define it so differently that we need to develop a composite definition.

b. What are your major problems in handling information that presently affect or will in the future affect the performance of your component and/or other Agency components?

c. What are the Agencywide management issues in information handling that you believe need attention in this study (e.g., planning, utilization of technology, internal organizational relationships, others)?

d. What programs, now under way or being planned, do need to be addressed in this study?

Component and directorate responses of varying length and comprehensiveness were received in December. The purpose of this memorandum is to present the results of the analysis of these responses.

2. Definition of information handling: The most common processing elements among those included in the definitions offered by various components were dissemination (also referred to as transmission, transfer, communication, flow, exchange or sharing), storage (also called recording, preservation, or filing), retrieval (the query process), and transformation (also manipulation, processing, transcription, editing, or reorganizing). Most definitions assumed a common understanding of what kinds of information were being stored and retrieved, but a few explicitly included references to management information as well as intelligence information, and there were several mentions of information needed to support decisions and to assist in the accomplishment of Agency missions. A brief composite definition would be:

Information handling in CIA is the systematic creation, movement, use, storage, retrieval, and disposal of intelligence and management information with the support of automated or other clearly identifiable processes and with due regard for control of sensitive and compartmented data.

3. Major information handling problems and management issues: By far the most common problem identified has to do with establishing Agencywide information handling policy. A majority of those commenting on this problem suggested organizational realignment as the most logical solution, calling to mind the conclusions of the July 1977 report to the then DDCI on "ADP Issue No. 3," which recommended among other things the establishment of a new component at the DDCI level, charged with responsibility for Agencywide ADP planning, policy formulation, and performance review.

Information Handling Issue No. 1: There is no central organization responsible for policy formulation, planning, and tracking the effectiveness of the many information handling systems in use or proposed for use in CIA.

The second most common set of problems and issues cited by Agency components involves the amounts of information which must be handled, the timeliness with which existing automated systems deliver the information, and the limited resources available to deal with the volume and improve the movement and retrieval. Selectivity, in collection, in retention, and in dissemination, is seen as essential. Reference is also made to the disparity between the investments made in sophisticated collection systems and those made to develop systems which will make the collected data available for analytical review and intelligence production.

Information Handling Issue No. 2: Growth in the volume of information handled by CIA components places a premium on development of more effective means of moving, selecting, retrieving, displaying, and discarding that information.

Related to the coordination problem already discussed is the matter of common standards, or the lack thereof, for the development of information handling systems. Not only software standards are lacking; there is no common policy governing the choice of hardware, and this lack is perceived as particularly shortsighted as decentralized use of mini- and micro-computers and word processors grows. Standardized approaches are desired, but preferably those which still permit tailoring to meet unique requirements of individual components. "Systematic" is the term most often used or implied in the discussion of this issue.

Information Handling Issue No. 3: No common standards and policies exist for planning and guiding the development of information handling systems and the selection of software and hardware to automate those systems.

(It should be noted that in a parallel development a task force organized by the DDA at the request of the DDCI recently completed a report which recommended the establishment of a permanent Agencywide committee of software specialists charged with the development of standards to be met by new software developed anywhere in CIA. The DDCI has approved the recommendation.)

The following issues, while not so commonly cited as those above, were mentioned in one guise or another by three or more offices and so deserve to be included in this compilation:

Information Handling Issue No. 4: Technological developments are blurring the traditional functional boundaries between information handling organizations, and we have not developed mechanisms to deal effectively with cross-functional information handling techniques.

Information Handling Issue No. 5: We have a growing need for a common query language to ensure efficient access to various data bases.

Information Handling Issue No. 6: Restrictive procurement directives and budgetary decisions inhibit Agency efforts to select efficient alternative mechanisms to solve specific information handling problems.

Information Handling Issue No. 7: Any study of CIA information handling must take into account the growing demands placed on CIA information systems to support Community programs.

Approved For Release 2002/05/17 : CIA-RDP84-00933R000100310017-1

The foregoing concentrates on areas of some agreement, but should not be taken to mean that there is universal agreement on all aspects of this complex subject. A number of divergences can be found, of which the most fundamental has to do with the scope of any study of information handling in CIA. On the one hand, we are urged to confine the task statement to be sure that task is manageable; on the other hand we are told that "failure to /include/ all of the ways in which data and information are manipulated within the Agency will frustrate /our/ efforts and result in a partial and incomplete answer...likely to be incompatible with functions not examined." The issue can be stated as follows:

Information Handling Issue No. 8: To be useful, the study of information handling in CIA must be comprehensive, even though no one has suggested that we create a single, monolithic information control system. A study of such magnitude will be costly and time consuming. Can we afford to do it? Can we afford not to do it?

4. Programs planned or under way, which must be addressed in any study of information handling. The programs most commonly cited as having relevance to the Information Handling Study are:

SAFE
Interim SAFE
Career Service Studies (ADP careerists, Registry and Information Control careerists)
Cable Dissemination System (CDS)
COINS II
ADSTAR
CRAFT
Crisis Management Project
New Standard Soft-copy Computer Terminal and Word Processor
ADP Standards Committees and Government Panels
IRO Study Plan
RAPID
AEGIS/RECON (and possible expansion to serve the Intelligence Community)
Display Conferencing
ETECS
CAMS
Security Task Force Recommendations
Persign
ETAR

5. The information handling problem: The essential elements of the problem as described by Agency components suggest the following composite statement of the problem:

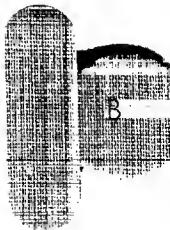
Problem: CIA handles enormous amounts of intelligence and management information. It has devised numerous manual and automated systems, some of them highly successful, to

assist in the generation, movement, use, storage, retrieval, and disposal of this mass of data. In far too many cases, however, these systems interact and relate to one another on a random, unplanned basis. Where exceptions exist, where "systems of systems" have been developed by forward-looking managers and systems analysts, there has existed no mechanism to relate these "systems of systems" to other such systems. Additionally, no Agencywide standards or policies exist to govern the development of new systems or the beneficial interfacing of existing systems. If we are to develop more orderly, systematic methods of managing our information, we need to know more about our existing information handling systems, about the ways in which these systems do or do not interact, and about how certain systems should interact.

6. The most significant messages conveyed by the responses to the Comptroller's questionnaire are that we are paying a significant if sometimes hidden price for the lack of planning in information management and that we can ill afford to allow vital information systems to proliferate in total independence one from another.

Bruce Johnson

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